

## CHAPTER 60 - PREDICTIVE SERVICES

Predictive Services is a decision support unit for federal, state and local land management agencies for operational management of and strategic planning for wildland fire management resources. Predictive Services accomplishes this through analysis of weather and climate, fuels, fire activity and behavior.

Intelligence gathering is a fundamental component of the national coordination system for federal state and local land agencies. Intelligence coordination is accomplished through compiling reports from all levels of the firefighting organization as well as communicating with individual GACC's and local jurisdictions concerning their historic, current and expected fire occurrence.

The products and services from both Predictive Services and the Intelligence section provide support for the proactive management of wildland fire with an eye toward safety, cost containment, efficiency and ecosystem health.

Predictive Services products are posted on the EACC Predictive Services website:

[https://gacc.nifc.gov/eacc/predictive\\_services/predictive\\_services.htm](https://gacc.nifc.gov/eacc/predictive_services/predictive_services.htm).

### 7 DAY SIGNIFICANT FIRE POTENTIAL OUTLOOK

The National 7-day Significant Fire Potential Outlook is a composite of outlooks produced by each of the Geographic Area Predictive Services units. The 7-day provides a week-long projection of fuel dryness, weather, and fire potential. The 7-day depicts a nationwide view of the significant fire potential for the next seven days with links to the individual Geographic Area 7-day outlooks. The system is database driven and is updated periodically as each Geographic Area Predictive Services unit posts its outlook. Each Geographic Area Predictive Services unit will determine whether to routinely produce a morning or afternoon product. Issuance times for each Area's outlook can be found in the Geographic Area Mobilization Guide and/or in its National Weather Service/Predictive Services Annual Operating Plan. Geographic Areas are required to provide 7-Day Outlooks daily, except when the Geographic Area Predictive Services unit is not staffed. Forecasts will include the forecaster's name or other agreed upon identifier to facilitate coordination.

All Geographic Area outlooks are available at:

<https://fsapps.nwcg.gov/psp/npsg/forecast#/outlooks?state=map>

The outlooks produced by the 10 Geographic Area Predictive Services units will be consolidated into a National 7-day Significant Fire Potential map located at:

<https://fsapps.nwcg.gov/psp/npsg/forecast#/outlooks?state=map>.

### NATIONAL WILDLAND SIGNIFICANT FIRE POTENTIAL OUTLOOK

The National Significant Wildland Fire Potential Outlook is prepared and distributed by NICC Predictive Services on the first day of each month. The Outlook is a composite of outlooks prepared by the individual Geographic Area Predictive Services units and national discussions prepared by NICC Predictive Services. It provides fire managers at all levels with the information needed to make long range decisions concerning resource staffing and allocation. The Outlook identifies areas where significant wildland fire activity is expected to be above or below normal levels.

The Outlook covers a four-month period, divided into four one-month sections. Maps for each period display areas of below normal, normal, and above normal significant wildland fire potential. A brief synopsis of the current and predicted national and GACC situation is included in the report. The Outlook begins with an Executive Summary which provides a brief synopsis of the past month's weather and a national overview of each of the outlook periods. The Past Weather and Drought section summarizes the weather of the past month and the evolution of any drought conditions to illustrate how fuels and fire conditions reached the current state. The Weather and Climate Outlooks section summarizes the broad climate patterns that will affect temperature and precipitation for the next four months. The Geographic Area Forecasts section provides brief but more specific weather, fuels and fire potential information for each of the Geographic Areas.

GACC monthly outlooks are mandatory. They provide greater detail than the national outlook issued by NICC. GACC monthly outlooks will adhere to the following protocols:

- GACC and NICC outlooks must be geospatially equivalent.
- GACC websites are required to link to the national outlook.
- GACCs are required to provide draft forecast maps as well as narrative highlights for the outlook period to NICC no later than five business days before the end of each month.
- GACC monthly outlooks will be issued and posted to the web on the first business day of each month. Maps will show areas where above normal, normal and below normal significant fire potential are expected. A discussion of fuel conditions, climate outlooks, and other pertinent information will be included in the outlooks.

#### **EACC MONTHLY FIRE POTENTIAL OUTLOOKS**

The Monthly/Seasonal Significant Fire Potential Report is to be completed by all dispatch centers and submitted to the EACC Fire Weather Program Manager by the close of business five business days prior to the end of the month, year-round.

The form is available on the EACC website:

[https://gacc.nifc.gov/eacc/predictive\\_services/outlooks/EAMonthly\\_Seasonal\\_Significant\\_Fire\\_Potential\\_Report.doc](https://gacc.nifc.gov/eacc/predictive_services/outlooks/EAMonthly_Seasonal_Significant_Fire_Potential_Report.doc)

The reporting Dispatch Centers shall include the following information within their narratives:

- The reporting Dispatch Center's unit(s), date and significant fire potential along with comments.
- A fire weather outlook detailing drought conditions, precipitation, and temperature anomalies.
- Fuels information.
- Average and actual fire occurrence data.
- An outlook map highlighting geographic areas of significant fire potential.

The content shall be brief with comments limited to two or three sentences per section.

**FUEL AND FIRE BEHAVIOR ADVISORIES (NMG, Ch. 60)**

Fuels and Fire Behavior Advisories are alerts issued as needed to address an exceptional or extreme circumstance that could threaten firefighter safety. Conditions that could be reasonably expected normally do not warrant a Fuels and Fire Behavior Advisory. Advisories will focus on fuel conditions and fire behavior that have long term impacts, not atmospheric conditions that can change significantly over short periods of time and can be found in other products.

Advisories will highlight conditions that are currently on-going and give specific examples that have been experienced in the field. Advisories should be tailored so that firefighters at all experience levels can recognize the situation and act accordingly. Advisories should be coordinated with neighboring administrative units to ensure that all areas with similar conditions are being addressed. All Advisories that extend beyond a single local administrative unit or that will be posted on the national Advisory map must be coordinated with the National Interagency Coordination Center and Geographic Area Coordination Center Predictive Service Units. Each Advisory must include a map of the affected area. Only one Advisory may be active at any time over any area. If multiple Advisory conditions are present incorporate them into one Advisory. Advisories will remain in effect for 14 days from issuance. If the Advisory conditions continue beyond the 14 days a new Advisory will need to be issued to update conditions and circumstances with more timely information. Advisory templates can be found at:

[https://www.predictiveservices.nifc.gov/fuels\\_fire-danger/fuels\\_advisories.htm](https://www.predictiveservices.nifc.gov/fuels_fire-danger/fuels_advisories.htm)

and in Chapter 80 of the National Interagency Mobilization Guide.

The Eastern Area Predictive Services Unit coordinates and issues fuels/fire behavior advisories within the Eastern Area. These advisories will be posted to the NIFC Predictive Services website at:

[https://www.predictiveservices.nifc.gov/fuels\\_fire-danger/fuels\\_fire-danger.htm](https://www.predictiveservices.nifc.gov/fuels_fire-danger/fuels_fire-danger.htm)

When a situation arises that warrants an advisory message, the following process should be followed:

- Determine area of extent
- If local area only (single agency unit or county):
  - Local area should issue advisory or safety message (use of standard template strongly recommended).
- If geographic in scope (multiple units, counties, or significant portion of geographic area):
  - Involve and coordinate with EA Predictive Services unit to get their input/feedback.
  - Discuss message on 09:30 MT Coordinators call to determine if other GACCs are facing same issue.
  - Review and tailor message for content, accuracy, suitability and distribution. Predictive services staffs at Geographic and/or National levels, as appropriate, will coordinate to ensure message is appropriate for entire area of concern.
- Post advisory according to protocols listed below.
  - Use Standard Template.

[http://www.predictiveservices.nifc.gov/fuels\\_fire-danger/Fuels\\_Fire\\_Behavior\\_Advisory\\_Template\\_2018.doc](http://www.predictiveservices.nifc.gov/fuels_fire-danger/Fuels_Fire_Behavior_Advisory_Template_2018.doc)

- Send completed advisory to NICC who will post to national fuels and fire behavior advisory

- web page.
- Create a detailed map using available tools to draw affected area and to coordinate with neighboring units.
- NICC Predictive Services will maintain a national webpage to display Fuels and Fire Behavior Advisories with links to advisory messages developed by local units and Geographic Area Predictive Service Units.
- It is recommended that URLs and email messages posted or sent out by the GACCs informing users about the advisory contain a link to the NICC Fuels/Fire Behavior web page. This will inform users about other fuels/fire behavior advisories that are posted across the country.
- GACC web pages should link to the NICC page for the advisory text and any advisory messages developed by local units.

Advisories will remain in effect for 14 days from issuance. If the Advisory conditions continue beyond the 14 days a new Advisory will need to be issued to update conditions and circumstances with more timely information. At the request of the issuer, Advisories may be lifted before the 14 days has passed. In either case, NICC should be notified to update the national fuels and fire behavior web page.

### **RED FLAG WARNINGS, FIRE WEATHER WATCHES**

Red flag warnings and fire weather watches occur when significant fire weather events are expected across a designated area. A Fire Weather Watch is issued when critical fire weather conditions may occur over a designated area. A Red Flag Warning is issued when critical fire weather conditions are either occurring or are imminent over a designated area.

Critical fire weather is locally defined criteria including strong winds, very low relative humidity, and warm temperatures leading to dangerous wildland fire conditions. Local fuel conditions and fire danger indices are also monitored and taken into consideration when issuing these products. Identification of these events is primarily the responsibility of the local National Weather Service (NWS) offices. The EACC Predictive Services web page has links to each NWS Fire Weather page within the Eastern Area: [https://gacc.nifc.gov/eacc/predictive\\_services/weather/weather.htm](https://gacc.nifc.gov/eacc/predictive_services/weather/weather.htm).

#### **a. Red Flag Warning**

A Red Flag Warning will be issued to warn the user of an impending or ongoing Red Flag event. A Red Flag Warning will be issued immediately when Red Flag conditions are occurring. Otherwise, it will be issued for impending Red flag conditions when there is a high degree of confidence that conditions will develop within the next 24 hours. All dispatch centers and forecast offices should report Red Flag Warnings in their area to EACC.

#### **b. Fire Weather Watch**

A Fire Weather Watch is used to alert the user to the possible development of a Red Flag event in the near future. The event could be up to 72 hours in advance. All dispatch centers and forecast offices should report Watches in their area to EACC.

### **EASTERN AREA MORNING BRIEFING**

The EA Morning Briefing is created using data from the SIT report, ICS-209 programs, EACC Predictive Services, ROSS reports, and additional intelligence products. It is produced daily from March 1<sup>st</sup> to November 1<sup>st</sup>. The brief is posted to the EACC website by 1100 hours CT.

**INTERAGENCY RESOURCE REPRESENTATIVE (IARR) DAILY CREW REPORTS**

IARR crew reports will be updated and posted to the EACC web site by 1500 hours when crews have been mobilized and an IARR has been assigned. IARRs are normally assigned when 3 or more Eastern Area crews are mobilized within the area or on out of area assignments.

**INCIDENT STATUS SUMMARY (ICS-209)**

All Eastern Area Dispatch Centers have access to the SIT/209 program and the Interagency Situation Report through the FAMWEB reporting system: <https://fam.nwcg.gov/fam-web/>. If you need application assistance or support, contact the EACC Intelligence Coordinator at 414-944-3811. Please review SIT/209 program instructions annually as changes do occur.

The Incident Status Summary (ICS-209) conforms to National Incident Management System (NIMS) policy. The ICS-209 is used to report large wildland fires and other significant events on lands under federal protection or federal ownership and is submitted to the GACC. Lands administered by states and other federal cooperators may also report in this manner.

The ICS-209 program is a Fire and Aviation Management Web (FAMWEB) application referred to as the “209 Program.” The ICS-209 is submitted by the agency that has protection responsibility for the incident, regardless of who administers the land. If the protection agency is non-federal and chooses not to meet federal reporting standards, then the federal agency which has administrative jurisdiction will submit the incident ICS-209. Geographic Area Intelligence Coordination staff will ensure that their local dispatch centers submit complete and accurate ICS209 reports for any wildland fire meeting the requirements specified in the When to Report Wildland Fire Incidents ICS-209 flowchart shown below available at:

<https://www.predictiveservices.nifc.gov/intelligence/intelligence.htm>

or as set in their Geographic Area Mobilization Guide, if more frequent.

Specific instructions for entering ICS-209 information can be found in the SIT-209 User’s Guide at: [https://gacc.nifc.gov/predictive\\_services/intelligence/niop/programs/sit\\_209/Help/index.htm](https://gacc.nifc.gov/predictive_services/intelligence/niop/programs/sit_209/Help/index.htm). The ICS-209 Program and electronic ICS-209 form is located at:

<https://fam.nwcg.gov/fam-web/>

**Required Reporting Wildland Fires**

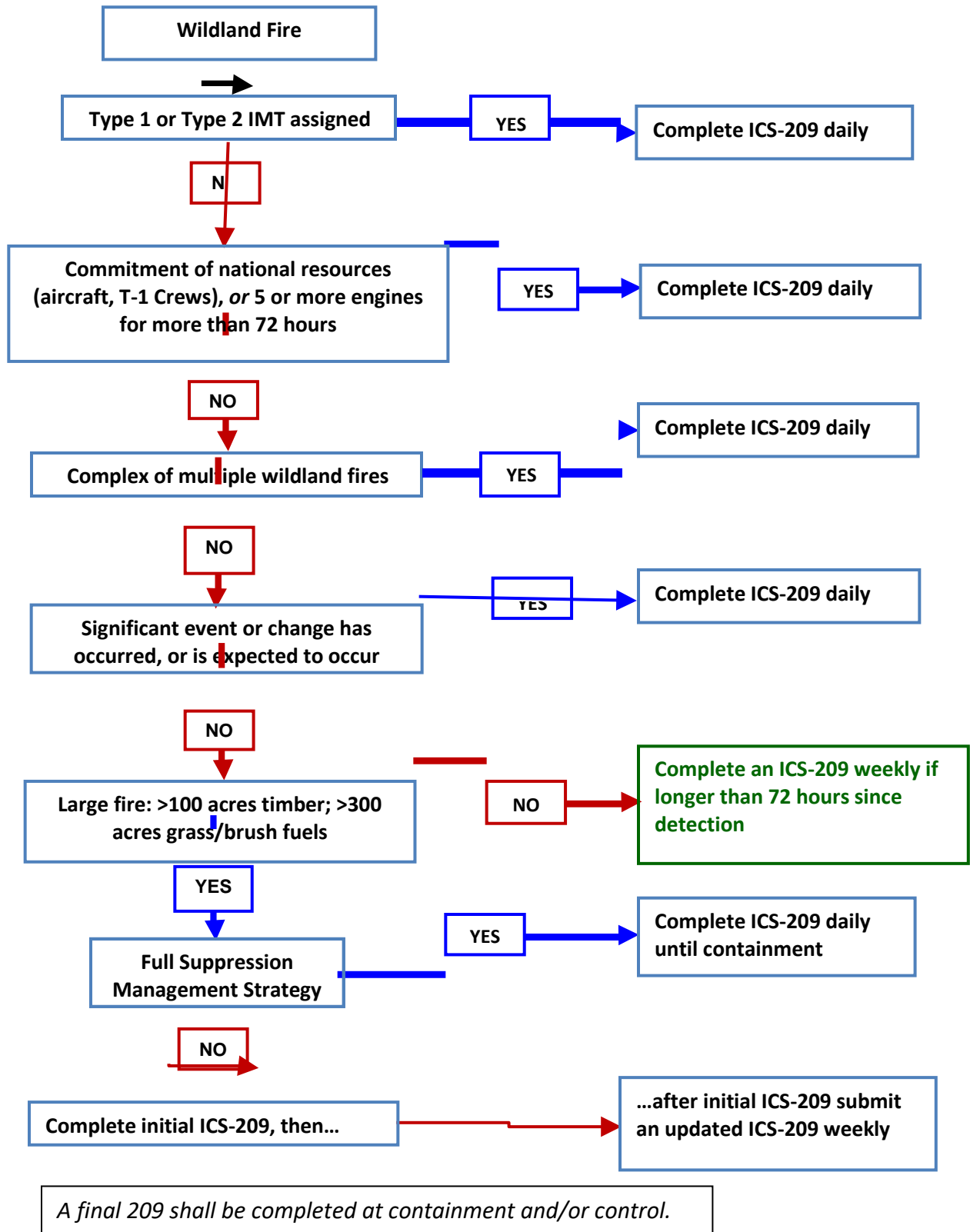
Wildland fires managed for complete perimeter control (full suppression) will submit an ICS-209 daily when that fire meets large fire criteria. For fires being managed under full suppression strategy an ICS-209 will be submitted daily before 0200 Mountain Time to report the previous day’s activity, until the incident is contained. Refer to the GACC Mobilization Guide, or agency policy for reporting requirements once containment is achieved.

The National Interagency Coordination Center classifies large fires as 100 acres or larger in timber and slash fuel types, 300 acres or larger in grass or brush fuel types, or when a Type 1 or 2 IMT is assigned.

Wildland fires managed under a Monitor, Confine, or Point Zone Protection management strategy will submit an ICS-209 following the guidelines outlined in the When to Report Wildland Fire Incidents with an ICS-209 flowchart shown below. For incidents that require daily reporting, ICS-209’s should be

submitted daily before 0200 Mountain Time. For incidents that require weekly reporting, ICS-209's should be submitted weekly before Friday at 0200 Mountain Time.

## When to Report Wildland Fire Incidents with an ICS-209



Wildland fires within a complex should be aggregated and included on one ICS-209. A complex is two or more individual incidents located in the same general proximity, which are assigned to a single incident commander or unified command. In order to maintain data management, reporting integrity, resource management and cost accountability for individual wildland fire incidents within a parent complex and to facilitate the necessary data sharing between fire application systems through IRWIN, the following complex reporting business practices for ICS- 209 and IRWIN must be followed.

- The complex parent is a unique record and is not a converted wildland fire incident record.
- The complex parent record should be created in an IRWIN recognized CAD system, or as an individual ICS-209. The parent incident shall include the word “Complex” and not be named from an existing fire.
- Individual child incidents can be added to a complex within the 209 program as either preexisting ICS-209 incidents or as individual IRWIN incidents created from another IRWIN recognized application using the ‘Complex by Incident’ button in block 7 of the 209 data entry screen. Finalize an existing ICS-209 child incident prior to associating the incident to the parent Complex.
- Incidents that do not have a unique IRWIN record cannot be added to the complex using the ‘Complex by Incident’ button.
- If an incident is removed from the complex, it may resume ICS-209 reporting as an individual incident if appropriate, using normal ICS-209 reporting guidelines.
- Prescribed fires will be reported following the requirements outlined in the When to Report Wildland Fire Incidents document.

For non-fire incidents, an ICS-209 will be submitted for other events in which a significant commitment of wildland fire resources has occurred, or when a Type 1 or 2 Interagency Incident Management Team has been assigned.

For more information refer to When to Report Wildland Fire Incidents document on the National Intelligence website at:

<https://www.predictiveservices.nifc.gov/intelligence/intelligence.htm>.

## DEFINITIONS

- **Significant number of resources** is defined as non-local resources that are required to manage an incident that exceed the capacity of the local unit.
- **Significant commitment of national resources** is defined as one or more Type 1 crews, one or more fixed wing or rotor wing aircraft.
- **Monitor** is the systematic process of observing, collecting and recording of fire-related data, particularly with regards to fuels, topography, weather, fire behavior, fire effects, smoke, and fire location. This may be done onsite, from a nearby or distant vantage point in person or using a sensor, or through remote sensing (aircraft or satellite).
- **Confine** is to restrict a wildfire to a defined area, using a combination of natural and constructed barriers that will stop the spread of the fire under the prevailing and forecasted weather conditions until out. This means, “some action is or has been taken” (line construction, bucket drops, etc.) to suppress portions of the fire perimeter.
- **Point or Zone Protection** involves protecting specific points from the fire while not actively trying to line the entire fire edge. Points being protected may be communities, individual homes, communication sites, areas of high resource value, etc.
- **Full Suppression** implies a strategy to “put the fire out” as efficiently and effectively as possible,

while providing for firefighter and public safety. To complete a fireline around a fire to halt fire spread, and cool down all hot spots that are immediate threat to control line or outside the perimeter, until the lines can reasonably be expected to hold under foreseeable conditions. Synonymous with “Full Perimeter Containment” and “Control.”

For more information refer to When to Report Wildland Fire Incidents document on the National Intelligence Site at: <https://www.predictiveservices.nifc.gov/intelligence/intelligence.htm>.

### **EASTERN AREA INTERAGENCY SITUATION REPORTING CRITERIA**

Eastern Area dispatch centers will submit SIT reports via the web based SIT program, <https://fam.nwcg.gov/fam-web/>, per the established schedule:

#### Daily Reporting

Big Rivers Compact	February 1 – April 30 and October 1 – December 1
Great Lakes Compact	March 15 – June 1 and September 1 – November 1
Mid-Atlantic Compact	March 1 – May 31 and October 1 – December 15
Northeast Compact	April 1 – November 1
EACC	Daily when the National preparedness level is 2 or higher (NMG, Ch. 60).

Daily SIT reports should be submitted by 16:00 hours local time for the last 24 hours of activity. If initial attack activity is such that the dispatch center is having difficulty meeting the 16:00 time frame, the dispatch center should contact the EACC Intel Coordinator and negotiate a later submission time. SIT reports may be submitted until 00:00 hours Central time and the data will still be contained in following mornings National Situation Report.

Outside of these parameters, weekly reporting on Thursday of each week by 16:00 (local time) will be sufficient, unless units are experiencing significant activity (fire, floods, ice storms, hurricanes). Units experiencing significant activity should report it as it occurs, on the day it occurs.

Eastern Area units should use the following criteria for determining when to submit SIT reports during the non-daily reporting time frames as stated above:

- Reporting unit’s fire danger is high to extreme.
- Wildland fire activity has occurred on your unit(s).
- Prescribed burn(s) are being implemented on your unit(s).
- Significant activity or large events occur within your local area (flooding, hurricanes, large hazmat, Homeland Security incidents, major sporting events, etc.).
- Commitment of significant resources (for example: timber sales, storm recovery, large hosted gatherings).
- Status updates for locally hosted National/Regional resources (Type 1 crews, Type 3 exclusive use helicopters, 4390 Starter Kits, ATMUs, Large Air Tankers or Helicopters, etc.).

### **INTERAGENCY SITUATION REPORT (SIT)**

- **Daily: issued daily, except when the unit is not staffed; such as weekends and holidays.**



The Interagency Situation Report (SIT) report identifies current wildland fire, prescribed burn activities and fire danger. This information is used by the GACCs, NICC, and other decision making groups (Congressional Staffers, Washington Offices, MACs, etc.).

The Eastern Area SIT report is posted in the Intelligence section of the EACC web page:

[https://gacc.nifc.gov/eacc/predictive\\_services/intelligence/intelligence.htm](https://gacc.nifc.gov/eacc/predictive_services/intelligence/intelligence.htm).

In order to keep fire managers abreast of current fire activity, a mechanism must be in place to allow dispatch centers the opportunity to provide crucial data. Current SIT report statistics benefit both State and Federal agencies and are the responsibility of the local unit dispatch center. NICC captures SIT information for the National Incident Management Situation Report (IMSR).

Full instructions for completion and helpful tips for the SIT report can be found on the following website:

[https://gacc.nifc.gov/predictive\\_services/intelligence/niop/programs/sit\\_209/Help/index.htm](https://gacc.nifc.gov/predictive_services/intelligence/niop/programs/sit_209/Help/index.htm).

- **Daily Fire Statistics:** Dispatch centers report both wildland and prescribed fire activity occurring during the past 24 hours (00:01 to 24:00 local time) on their units in the Daily Fire Statistics screen of the SIT program. New acres burned on an ongoing wildfire should be reported daily on the sit report. (Example: if the fire started yesterday and was 500 acres, enter 1 fire for 500 acres. Today it is 700 acres so 0 fires for 200 acres would be entered.) Do not wait until the fire is controlled or out to report acres.
- **Planned Prescribed Fires:** This section is for reporting prescribed fire projects that are planned within the next few days. It gives managers an idea of the numbers of projects planned and resource commitments.
- **Remarks:** This area should include a synopsis of current or expected weather, fuel/drought conditions, and your anticipated fire activity. Include significant events or problems, resource shortages, expected lighting or wind events. This area also captures your on-call/duty officer information. You can also explain reductions/additions of acres in your YTD totals and inform EACC if you are planning weekend staffing.
- **Year to Date (YTD) Statistics:** This area tracks your calendar year fire statistics. The SIT report automatically calculates new YTD totals for all fire types. Use this tab to report fires which occurred on a date other than the current date. Corrections in agency numbers of fires or acres are made here.
- **Incident Priorities:** Dispatch centers will use this screen to assign their internal incident priorities.
- **ICS-209 Entry:** For those incidents where an IMT is not assigned or is unable to enter incident information directly into the 209 program, dispatch centers will compile incident information and submit it via the SIT report program. When meeting the proper submission criteria (EMG, Ch. 60), ICS-209s need to be completed the day the incident meets the criteria and updated daily until the fire is 100% contained.

### INCIDENT MANAGEMENT SITUATION REPORT (IMSR)

The National Incident Management Situation Report (IMSR) shall be issued daily at National Preparedness Level 2 and above, or whenever significant wildland fire activity or resource

mobilization occurs. Whenever daily reporting is not required, the IMSR will be issued weekly on Fridays.

The IMSR is prepared by the NICC Intelligence Coordination staff from information and data derived from the Interagency Situation Report and 209 Program through the FAMWEB reporting system. A brief national weather/fire potential outlook will be prepared by NICC Predictive Services for inclusion in the Predictive Services Discussion section of the IMSR.

Large full suppression wildland fires are typically reported in the IMSR until the incident is contained; no longer has a commitment of at least 100 personnel; is no longer demonstrating significant activity; or is failing to provide new reports submitted as required. Wildland fires managed under a Monitor, Confine, or Point Zone strategy will initially be reported in the IMSR when the event exceeds 100 acres in timber and slash fuel types, 300 acres in grass or brush fuel types, or has a Type 1 or 2 IMT assigned. Such large, long duration fires will be reported in the IMSR until activity diminishes, and thereafter when significant activity occurs (such as an acreage increase of 1,000 acres or more since last reported, significant resource commitment or a significant event occurs).

The Active Incident Resource Summary is updated daily in the IMSR. It includes the total count of fires and acres with resources assigned that have been reported in the SIT-209 program within the last seven days.